

**Amendments to the Drawings:**

The attached sheets of drawings include a sheet including Figs. 1 and 2 and showing changes to Fig. 2 which should replace the original sheet including Figs. 1 and 2; a sheet including Fig. 10 and showing changes to Fig. 10 to replace the original sheet including Fig. 10; a sheet including Figs. 13 and 14 and showing changes to both Figs. 13 and 14 for replacing the original sheet including Figs. 13 and 14; and a sheet including Fig. 21 and showing changes to Fig. 21 to replace the original sheet including Fig. 21. Errors in these figures have been corrected.

**Attachment:** Replacement Sheets, Annotated Sheets Showing Changes.

**ARGUMENTS/REMARKS**

Applicants would like to thank the examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office action, and amended as necessary to more clearly and particularly describe and claim the subject matter which applicants regard as the invention.

In the specification, various paragraphs objected to by the Examiner have been amended to correct minor editorial problems. Furthermore, a new title has been provided at the request of the Examiner.

The examiner objects to figures 2 and 10 for errors. The proposed drawing amendments have been submitted to correct these errors and additional errors, making the objection moot.

The Examiner has argued that the IDS filed on February 14, 2005 fails to comply with 37 CFR 1.98(a)(3) for not including a concise explanation of the relevance of the reference. Applicants note that the only known relevance of the reference, which was uncovered by a Chinese examiner, is that cited in the Chinese Office action to which the Examiner refers, and which was submitted with the IDS. Applicant does not know of any other relevance of the reference, and does not have any additional information about the cited reference other than that submitted with the IDS. The submitted text is the entire understanding of the relevance of the reference. Accordingly, the submission complies with 37 CFR 1.98(a)(3).

Claims 15-16 remain in this application. Claims 1-14 and 17-26 have been previously canceled. New claims 27 and 28 have been added without adding any new matter.

Claims 15 and 16 were rejected under 35 U.S.C. §103(a) as being unpatentable over Boles (U.S. 5,506,584) in view of Farmer (U.S. 5,748,295). For the following reasons, the rejection is respectfully traversed.

The cited references do not teach a “control means which restricts establishment of communication with the vehicle traveling in a predetermined direction” as recited in amended claim 15. Claim 15 recites a “a road antenna” with specific limitations and a

“Doppler signal processor which detects the traveling direction of the vehicle” The Examiner cites Boles as the primary reference teaching the “road antenna” and “control means” of the claim, but the Examiner admits that Boles does *not* teach a Doppler processor for detecting a “traveling direction” of a vehicle, and instead the Examiner cites Farmer as teaching such a processor.

However, even if the Examiner is correct that Farmer has such a teaching, the Examiner has failed to show any teaching of a controller that specifically “restricts establishment of communication with the vehicle traveling in a predetermined direction”. There is no suggestion of restricting communication.

Furthermore, the Examiner admits that Boles does not teach detecting a vehicle traveling direction, and yet cites Boles as teaching a controller that uses such a detected parameter. Of course, this is not logical. If Boles does not determine a vehicle traveling direction, it cannot use such a parameter in its controller. A close reading of the Boles reference shows no support for any controller which “restricts establishment of communication with the vehicle traveling in a *predetermined direction*”. Farmer does not overcome this Boles shortcoming, and thus the combined teaching of the references fails to render the claim obvious, and thus the claim is patentable over the references. Claim 16, which depends on claim 15, is patentable over the references for at least the same reasons.

Furthermore, the Examiner cites Boles filter 32 as teaching the “reflected wave extraction means which receives the reflected wave and a receipt wave emitted from the on-vehicle device, the reflected wave extraction means extracts only the reflected wave” of claim 16. However, a close reading of the reference does not support any teaching of filter 32 as extracting only the reflected wave, as recited in the claim. Thus, claim 16 is patentable over the references for this reason as well.

In addition, the Farmer reference is not relevant to the application or the Boles reference. Farmer discloses an apparatus for determining the range, direction, and velocity of an object using a light or matter wave beam (see, e.g., col. 6, lines 11-22 and col. 7, lines 60-67). There is no disclosure of any reflected wave being formed when a radio communication transmission wave is emitted from a road antenna, because the reference does not use antenna or radio waves.

Furthermore, the Examiner has not provided the proper motivation for combining the references. The burden is on the Examiner to make a prima facie case of obviousness (MPEP §2142). To support a prima facie case of obviousness, the Examiner must show that there is some suggestion or motivation to modify the reference (MPEP §2143.01). The mere fact that references can be combined or modified, alone, is not sufficient to establish prima facie obviousness (Id.). The prior art must also suggest the desirability of the combination (Id.). The fact that the claimed invention is within the capabilities of one of ordinary skill in the art is not sufficient, by itself, to establish prima facie obviousness (Id.).

The Examiner merely states that it would be obvious to combine the references to “provide a more comprehensive vehicle highway system.” This is not legally sufficient motivation, as it is merely a conclusory statement of benefit that would not “motivate” one skilled in the art to make the modifications suggested by the Examiner.

Merely listing an advantage or benefit of the combination is not legally sufficient, as some rationale for combining the references must be found in the references themselves, or drawn from a convincing line of reasoning based on established scientific principles practiced by one skilled in the art that some advantage or beneficial result would be produced by the combination (MPEP §2144). Such motivation cannot be found in the application itself, as such hindsight is impermissible; the facts must be gleaned from the prior art. (MPEP §2142, last paragraph).

“To reach a proper determination under 35 U.S.C. 103, the examiner must step backward in time and into the shoes worn by the hypothetical ‘person of ordinary skill in the art’ when the invention was unknown and just before it was made [and] the examiner must then make a determination whether the claimed invention ‘as a whole’ would have been obvious at that time to that person.” (MPEP §2142, emphasis added). It is not proper to merely combine various elements from various references. The invention must be obvious “as a whole”, not as a piecemeal combination of elements from various references.

Accordingly, the rejection for obviousness is not supported by the Office action and thus the rejection is improper, and should be withdrawn.

Finally, new claims recite at least some limitations similar to those discussed above, and thus is patentable over the references for at least the same reasons.

In consideration of the foregoing analysis, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. 32758US6.

Respectfully submitted,  
PEARNE & GORDON, LLP

By: 

Robert F. Bodi, Reg. No. 48540

1801 East Ninth Street  
Suite 1200  
Cleveland, Ohio 44114-3108  
(216) 579-1700

December 22, 2005

FIG. 1

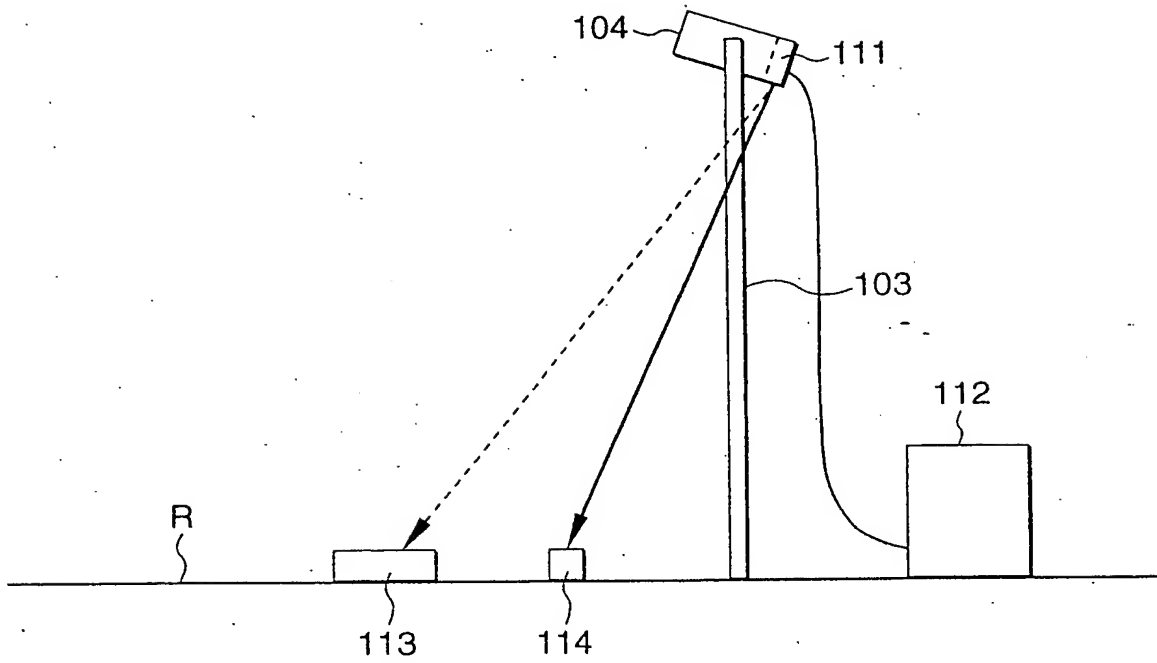


FIG. 2

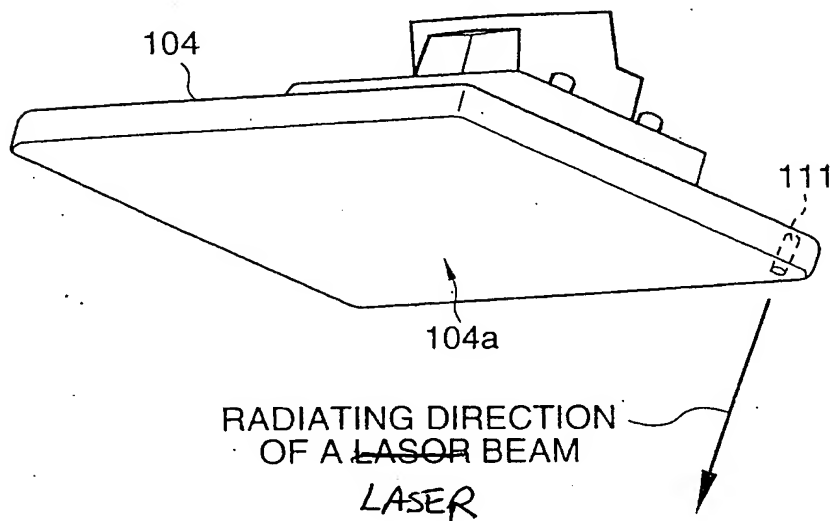


FIG. 10

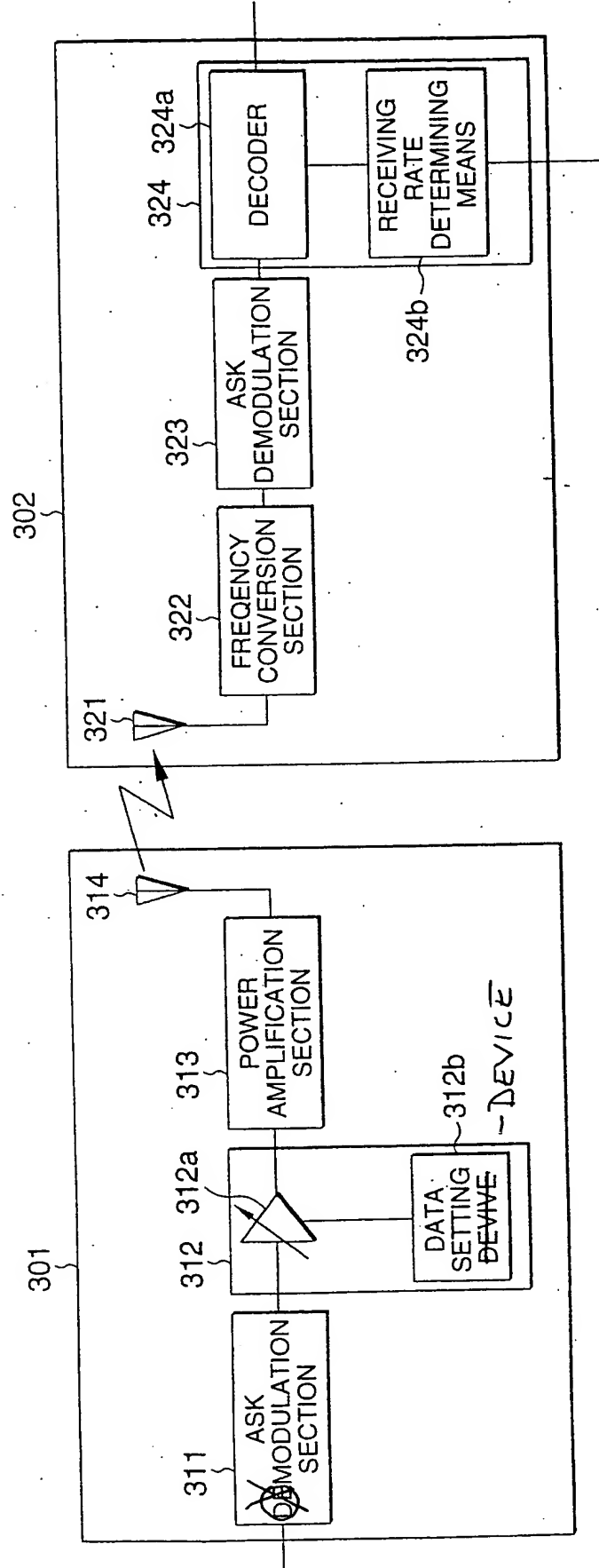


FIG. 13

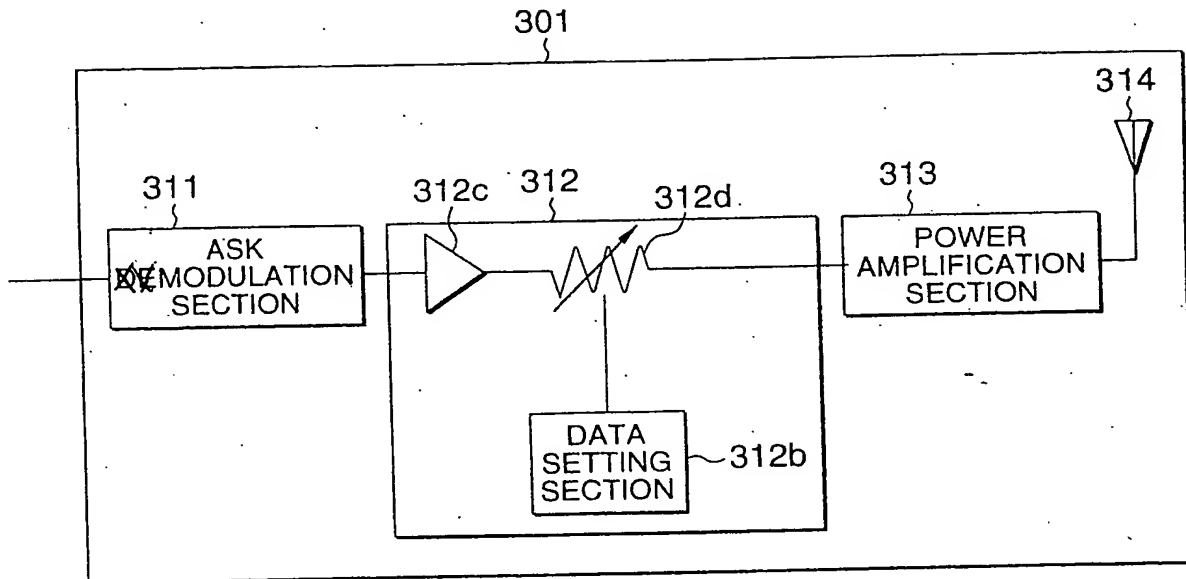


FIG. 14

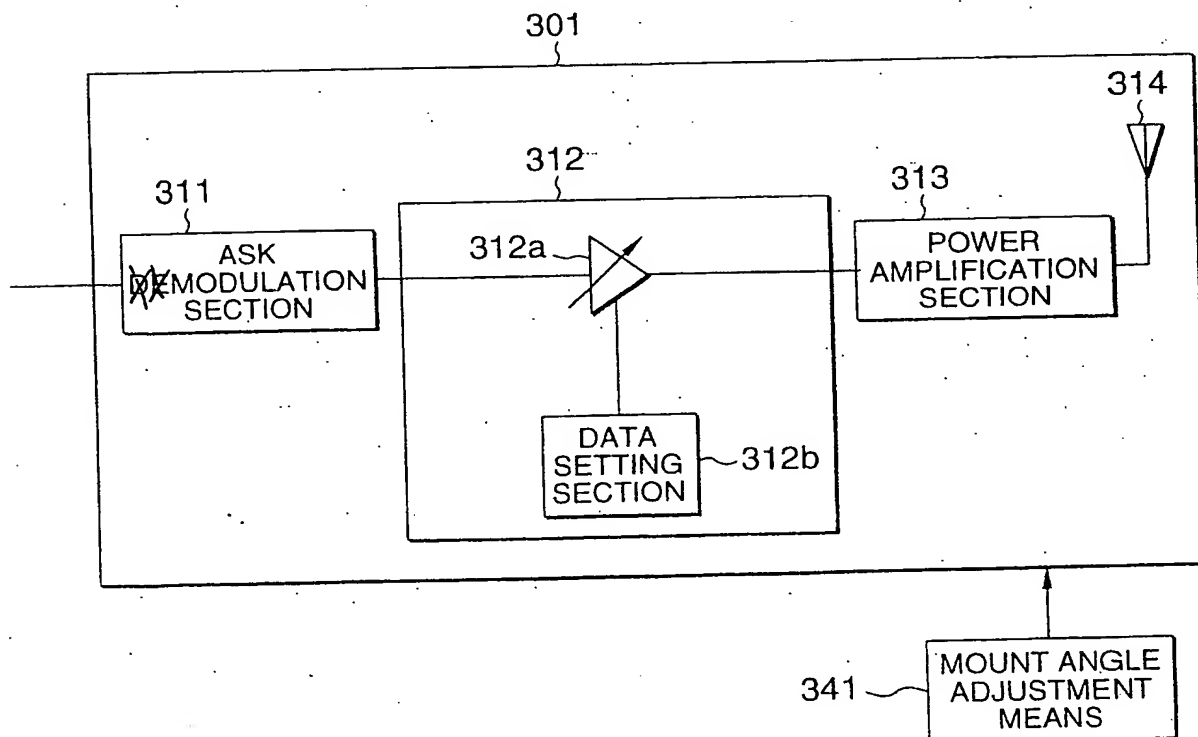




FIG. 21

